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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/960,098	09/21/2001	Mineo Okamura	FUJZ 19.021(100794-11761)	5081

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EXAMINER	
WONG, WARNER	

ART UNIT	PAPER NUMBER
2616	

DATE MAILED: 11/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/960,098	OKAMURA, MINEO	
	Examiner	Art Unit	
	Warner Wong	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 30 October 2006.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-7 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-7 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

1. Claim 1-3 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee (US 6,59,225).

Regarding claim 1, Lee describes a system comprising:

a managing communication device (fig. 1 or 2, Home Agent 26);

a mobile node managed by the managing communication device (fig. 1 or 2, mobile node 20);

an accommodating communication device accommodating the mobile node (fig. 1 or 2, foreign agent 28 or 34);

the managing communication device releasing, with a movement of the mobile node managed, an older tunnel already established so as to prevent a number of all tunnels established between the communication device itself and accommodating communication device from exceeding a predetermined threshold value (fig. 2-3 and col. 6, lines 2-5, where in step S6, the Home Agent 26 (communication device) deregisters/disconnects (releases the older tunnel to/from) the older Foreign Agent 28

(FA), due to movement of mobile wireless node 14 which prompts a handoff, to prevent more than one (predetermined threshold value) [permanent] tunnel to/from the mobile 14. It is noted that this is different from step S7, where the communication/routing of data to the old FA is terminated).

Regarding claim 2, Lee further describes that the threshold value comprises a unique value to each mobile node (col. 6, lines 2-4, where there is the limit of only "1" tunnel (unique threshold value) to permanently exist for each mobile 14).

Regarding claim 3, Lee describes a communication device which manages a mobile node (fig. 1 or 2), comprising:

means establishing, with a movement of a mobile node, a tunnel for transferring a communication packet with the mobile node to an accommodating communication device accommodating the mobile node at a moved destination (fig. 3, where the Home Agent 26 (communication device) manages/establishes, with the movement of the mobile 14 to another location prompting a handover, a new tunnel to the new FA 34 (accommodating mobile node) for data packet communication),

means for controlling a number of tunnels to be within a predetermined number (fig. 2-3 & col. 6, lines 2-5, where in step S6, the Home Agent 26 (communication device) deregisters/disconnects (releases the older tunnel to/from) the older Foreign Agent 28 (FA), to prevent more than one (predetermined threshold value) [permanent] tunnel to/from the mobile 14.)

2. **Claim 4** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Suzuki (US 6,791,946).

Lee describes a system, comprising:

a managing communication device (fig. 1 or 2, Home Agent 26);

a plurality of mobile nodes managed by the managing communication device (fig. 1 is the same network as that of its prior art (col. 1, lines 34-38), where plurality of mobiles exist, but with improvements);

an accommodating communication device accommodating the mobile node (fig. 1 or 2, foreign agent 28 or 34);

the managing communication device which, when a new tunnel is required to be established with a movement of a single mobile node to be managed, releases an older tunnel corresponding to the single mobile node to establish the new tunnel when at least one tunnel corresponding to the single mobile node is established (fig. 2 & 3, & col. 6, lines 2-4, where in step S7, the Home Agent 26 (communication device) terminates/disconnects (releases the established/older tunnel to/from) the older Foreign Agent 28 (FA) and the mobile wireless node 14 due to the mobile's movement which prompts a handoff to establish another [permanent] new tunnel).

Lee fails to explicitly describe the condition of:

when a number of all tunnels presently established for all mobile nodes by the communication device itself exceed a predetermined threshold value, and no [new] tunnel corresponding to the single mobile node is established, rejecting the establishment of the new tunnel.

Suzuki describes:

when a number of all tunnels presently established for all mobile nodes by the communication device itself exceed a predetermined threshold value, and no [new] tunnel corresponding to the single mobile node is established, rejecting the establishment of the new tunnel (col. 13, lines 21-54, where when the number of all links (tunnels) represented by the availability of VPI/VCI identifiers reach a predesignated threshold value, it will pause in granting (rejecting) the establishment of a new link (tunnel) and release some mapped identifiers (links) before granting).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate the resource allocation process of Suzuki to the tunneling allocation process within the Home Agent of Lee.

The motivation for combining the teachings is that there is a need for the device which allocates connection/tunnel resources to prevent existing calls from being dropped, (Suzuki, col. 4, lines 30-34).

3. **Claim 5** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Suzuki as applied to claim 4 above, and further in view of Baiyor (6,282,429).

Lee and Suzuki fail to describe:

the mobile nodes are classified into a plurality of classes based on a plurality of threshold values, and the establishment of a new connection/tunnel is rejected or executed/allocated based on the threshold value corresponding to the class to which the mobile node belongs.

Baiyor describes:

the mobile nodes are classified into a plurality of classes based on a plurality of threshold values, and the establishment of a new connection/tunnel is rejected or executed/allocated based on the threshold value corresponding to the class to which the mobile node belongs (col. 2, lines 62-63 and col. 5, lines 47-55).

It would have been obvious to one with ordinary skill in the art at the time of invention by applicant to incorporate the connection determination process based on classification/priorities such as Baiyor to the combined system of Lee and Suzuki.

The motivation for combining the teaching is that "It would be advantageous to identify wireless subscribers who have priority calling before the call origination request consumed significant call processing resources" (col. 2 lines 2-4).

4. **Claim 6** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Douglis (6,487,596).

Lee describes a system, comprising:

a managing communication device (fig. 1 or 2, Home Agent 26);

a plurality of mobile nodes managed by the managing communication device (fig. 1 is the same network as that of its prior art (col. 1, lines 34-38), where plurality of mobiles exist, but with improvements);

an accommodating communication device accommodating the mobile node (fig. 1 or 2, foreign agent 28 or 34);

the managing communication device which establishes, with a movement of the mobile node managed, a tunnel between the communication device itself and an accommodating communication device (fig. 3, where the Home Agent 26 (communication device) establishes, with the movement of the mobile 14 to another location prompting a handover, a new tunnel to the new FA 34 (accommodating mobile node)).

Lee fails to describe the communication device of:

determining a lifetime of a tunnel, so that when a number of all tunnels presently used is large the lifetime is shortened.

Douglis describes a modem bank 20 (communication device) of:

determining a lifetime of a tunnel, so that when a number of all tunnels presently used is large the lifetime is shortened (col. 4, lines 25-31, where the timeout (lifetime) of a modem connection (of a tunnel) is due to the number of connections/loading of the modem bank).

It would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the connection timeout method of Douglis into the communication device of Lee.

The motivation for combining the teachings is that system resources may be gained by varying the lifetime of individual connections [tunnels] " a disconnected user [connection] represents a recovered resources .. that can be used for another user" (col. 2, lines 16-18).

5. **Claim 7** is rejected under 35 U.S.C. 103(a) as being unpatentable over Lee in view of Douglis as applied to claim 6 above, and further in view of Jennings (6,597,774).

Lee and Douglis combined fail to describe:

the lifetime is notified to the mobile node.

Jennings describes:

the lifetime is notified to the mobile node (col. 1, line 32, where remaining time of the [prepaid] call is notified at the user [mobile node]).

It would have been obvious to one with ordinary skill in the art at the time of invention to incorporate the feature of informing the connection lifetime to the user as in Jennings for the combined system of Lee and Douglis.

The motivation for combining the teachings is that this feature of informing the user the lifetime/remaining time to optimize the billing [prevents another call if necessary communication is unfinished when call time is over] (Jennings, col. 1, lines 29-31).

Response to Arguments

6. Applicant's arguments filed October 30, 2006 have been fully considered but they are not persuasive.

On p. 6, lines 1-12, the applicant argues regarding claim 1 that Lee fails to teach any means for controlling the number of base stations/tunnels to be handled at a time of a call handoff. The examiner respectively disagrees.

Firstly, the examiner understands that the phrase "so as to prevent a number of all tunnels established .. from exceeding a predetermined threshold value" in lines 6-7 is

not a limitation, but a consequence from the claim limitation "releasing an older tunnel". Therefore, it is justified that the Lee reference of releasing an older tunnel fulfills such consequence (see applicant's fig. 1 in comparison to Lee's fig. 1 or 2).

Moreover, even if the above phrase is considered as a claim limitation, the Lee reference already exemplifies via fig. 1 or 2 & 3 that the home agent (managing device) releases the older connection/tunnel (i.e. controls the number of connections in a handoff) within a two (2) base station scenario/embodiment. In the argument on p. 6, lines 4-5, the applicant submits that the Lee reference extends the above scenario to be "readily adapted to handle any number of base stations in negotiation", which is considered as another embodiment.

Arguments pertaining to independent claims 3 & 4, as well as dependent claims 5 and 7, are of the same arguments as above.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Warner Wong whose telephone number is 571-272-8197. The examiner can normally be reached on 6:30AM - 3:00PM, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Warner Wong
Examiner
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